

ABSTRACT OF THE DISCLOSURE

The present invention provides a primary-side flyback power converter that supplies a constant voltage output and a constant current output. To generate a well-regulated output voltage under varying load conditions, a PWM controller is included in the power converter in order to generate a PWM signal controlling a switching transistor in response to a flyback voltage sampled from a first primary winding of the power supply transformer. Several improvements are included in this present invention to overcome the disadvantages of prior-art flyback power converters. Firstly, the flyback energy of the first primary winding is used as a DC power source for the PWM controller in order to reduce power consumption. A double sample amplifier samples the flyback voltage just before the transformer current drops to zero. Moreover, an offset current is pulled from a detection input of the double sample amplifier in order to generate a more accurate DC output voltage. The offset current is generated in response to the temperature in order to compensate for temperature-induced voltage fluctuations across the output rectifier. Ultimately, in order to maintain a constant output current, the PWM controller modulates the switching frequency in response to the output voltage.